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REMARKS

Claims 1-9 are pending in the present application after this amendment adds new claims 8 and 9. The new claims do not add new matter and are supported throughout the specification and figures. In particular, the new claims are supported in the specification at page 5, line 23 to page 6, line 2, and in figure 2. In view of the amendments and the following remarks, favorable reconsideration of this case is respectfully requested.

Claims 1-3 and 7 stand rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 4,627,533 to Pollard (hereinafter Pollard). Applicants respectfully traverse.

Claim 1 relates to a temperature-compensated crystal oscillator that includes, *inter alia*, a substrate having a circuit pattern disposed on a surface thereof and mounting electrodes disposed on a reverse side thereof and electrically connected to the circuit pattern, and circuit components mounted on the surface of the substrate and electrically connected to the circuit pattern. Claim 1 also recites *a surface-mount crystal unit having a hermetically sealed crystal unit*, and mounted on the surface of the substrate and electrically connected to the circuit pattern. In the temperature-compensated crystal oscillator of claim 1, the crystal unit has *a cavity defined in a mounting surface thereof*. At least one of *the circuit components is housed in the cavity* and at least one of the remaining circuit components is disposed outside of the cavity.

Pollard does not disclose a surface-mount crystal unit having a hermetically sealed crystal unit. The Examiner asserts that figure 2 and column 4, lines 24-30 disclose this feature (Office Action; page 2, line 10). However, the Examiner also asserts that element 42 is a substrate (Office Action; page 2, line 12). Assuming for the sake of argument that element 42 is a substrate, which is respectfully not conceded and is argued separately below, figure 2 does not disclose an element, distinct from the substrate, which seals a crystal unit. Element 42 is an

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integral part of the sealing provided in figure 2, as there would clearly be no seal if it were removed. Therefore, figure 2 does not disclose *a surface-mount crystal unit having a hermetically sealed crystal unit*. The cited passage in the specification of Pollard lends no additional support to the Examiner's position, and in fact undermines that position. The cited section indicates that the oscillator cavity is sealed, however, this is clearly after elements 12 and 26 are mounted on element 42, and after covers 78 and 80 are attached. Therefore, there is no surface-mount crystal unit having a hermetically sealed crystal unit, and therefore Pollard does not anticipate claim 1.

Additionally, Pollard does not teach the feature that a cavity is defined in a mounting surface of the crystal unit. The Examiner asserts that reference numeral 42 in Pollard is a substrate. However, this is not correct. A crystal unit has, in general, a crystal blank and a package hermetically sealing the crystal blank. In Pollard, element 42 apparently constitutes a part of a package which encloses crystal blank 72. Element 42 in Pollard is not a substrate, but is rather a center plate (Pollard; col. 2, line 47). Therefore, Pollard does not disclose or suggest a substrate, distinct from the surface-mount crystal unit, as recited in claim 1.

Furthermore, Pollard does not teach a surface-mount crystal unit having *at least one of the circuit components being housed in the cavity and at least one of the remaining circuit components being disposed outside of the cavity*. The Examiner appears to assert that the circuit components housed in the cavity, as recited in the claims, are disclosed in Pollard by oscillator crystal 72. (Office Action; page 2, lines 11-15). However, oscillator crystal 72 is apparently asserted by the Examiner to disclose the surface-mount crystal unit, and therefore cannot also disclose the *separate and distinct* feature of the circuit components that reside in the crystal unit along with the surface-mount crystal unit. Therefore Pollard does not disclose the feature of the

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circuit components residing in the cavity of the crystal unit *along with* the hermetically sealed crystal unit, as recited in claim 1. The Examiner's reading of the claims combines two distinctly claimed features into one item. Pollard does not disclose the feature that at least one circuit component is housed in the cavity and at least one of the remaining circuit components is disposed outside of the cavity. Therefore, for at least this additional reason, the rejection of claim 1 should be withdrawn.

Claims 2, 3, and 7 depend from claim 1, and therefore these claims are allowable for at least the same reasons as claim 1 is allowable.

Claims 4, 5, and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pollard in view of United States Patent No. 6,487,085 to Kimura et al. (hereinafter Kimura).

The addition of Kimura fails to cure the deficiency noted above with respect to claim 1, from which claims 4, 5, and 6 depend, and therefore these claims are allowable for at least the same reasons as claim 1 is allowable.

New claims 8 and 9 depend from claim 1 and are therefore allowable for at least the same reasons as claim 1 is allowable.

Additionally, claim 8 recites that the hermetically sealed crystal unit is sealed in a casing independent of the substrate. According to the present invention, the cavity for accommodating at least one circuit component is defined in a mounting surface of the crystal unit. In the apparatus disclosed in the specification:

surface-mount crystal unit 20 is mounted on the surface of substrate 17 in superposed and covering relation to six circuit components 19. *Crystal unit 20 comprises a quartz crystal blank hermetically sealed in a casing.* The casing has cavity 21 defined in the surface thereof which faces substrate 17 for accommodating circuit components 19 therein *when crystal unit 20 is mounted on the surface of substrate 17.*

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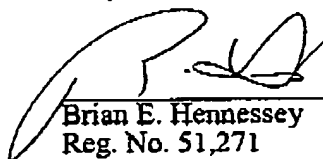
(Specification; page 5, line 23 to page 6, line 2; emphasis added). Therefore, in claim 8 a casing is formed in the mounting surface of the crystal oscillator, which accommodates a crystal blank and hermetically seals the unit independent of the substrate. The Examiner asserts that element 42 in Pollard is a substrate, which is respectfully not conceded. However, it is apparent that the seal around element 72 depends on element 42 in Pollard. Therefore, Pollard does not disclose or suggest a hermetically sealed crystal unit sealed in a casing independent of the substrate, and for at least this additional reason, claim 8 is allowable.

Claim 9 recites that the hermetically sealed crystal unit is not mounted on the substrate. Since the Examiner asserts that element 42 is a substrate, which is again respectfully not conceded, it is apparent that in Pollard, element 72 is mounted on element 42. Therefore, for at least this additional reason, claim 9 is allowable.

### CONCLUSION

In view of the remarks set forth above, this application is believed to be in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action. Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,



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